

REMARKS

Claims 1, 3-12, 15-23, 25, 26, 28 and 31-35 are pending in the Application. Claim 32 is withdrawn from consideration. Hence, claims 1, 3-12, 15-23, 25, 26, 28, 31 and 33-35 are under examination.

With respect to the claims under examination, claims 1, 4-12, 15-18, 20-23 and 33-35 are provisionally rejected on the ground of non-statutory obviousness-type double patenting. Furthermore, claims 1, 3-12, 15, 17-21, 25, 26, 28 and 31 are rejected under 35 U.S.C. §103(a).

Claim 16 is objected to as being dependent upon a rejected base claim but would be allowable if rewritten in independent form.

Claims 33-35 are allowed.

Applicant addresses these rejections to the claims under examination below.

I. REJECTIONS UNDER 35 U.S.C. §103(a):

The Examiner has rejected claims 1, 3-12, 15, 17-21, 25, 26, 28 and 31 under 35 U.S.C. §103(a) as being unpatentable over Goodwin et al. (WO 02/28548) (hereinafter "Goodwin") in view of Badyal et al. (WO 98/58117) (hereinafter "Badyal"). Furthermore, the Examiner has rejected claim 22 under 35 U.S.C. §103(a) as being unpatentable over Goodwin in view of Badyal and in further view of Vaartstra et al. (U.S. Patent No. 6,402,126) (hereinafter "Vaartstra"). Additionally, the Examiner has rejected claim 23 under 35 U.S.C. §103(a) as being unpatentable over Goodwin in view of Badyal and in further view of Ruta et al. (U.S. Patent No. 6,012,647) (hereinafter "Ruta") and The Generation and Measurement of Aerosols (hereinafter "Bailey"). Applicant respectfully traverses these rejections for at least the reasons stated below and respectfully requests the Examiner to reconsider and withdraw these rejections.

- A. Claims 1, 3-12, 15, 17-21, 25, 26, 28 and 31 are not properly rejected under 35 U.S.C. §103(a) as being unpatentable over Goodwin in view of Badyal.

The Examiner rejects independent claim 1 under 35 U.S.C. §103(a) as being unpatentable because it would allegedly be obvious for one of ordinary skill in the art to combine Goodwin and Badyal to arrive at the current invention. Office Action (1/29/2010), pages 2-3. Applicant respectfully traverses.

It would not be obvious for the person skilled in the art to combine the teachings of Goodwin and Badyal for the following reasons. Turning firstly to Goodwin, this publication teaches forming a coating on a substrate wherein the deposition proceeds at a constant level, as indicated at page 11, lines 20-21 for example. There is therefore no disclosure of the exciting medium being pulsed. The problem that the current invention seeks to solve over Goodwin is how to improve structural retention of the coating forming material onto the substrate, when compared to known methods of coating deposition. In the present invention, the exciting medium is pulsed and forms chemically activated precursor species, such as ions or radicals, during each pulse, which, as described on page 7, second paragraph, of the International publication, results in an improved structural retention on the substrate due to, for example, coating forming processes, such as free radical polymerisation that can occur between pulses.

Badyal, on the other hand, describes a method where pulsing of the exciting medium is used to increase the velocity of the coating forming material (see for example, column 2 lines 55-67, column 8 lines 26-29, and column 14 lines 8-17) which is an important factor in producing hard, dense, uniform coatings. Badyal therefore teaches away from the present invention, as a skilled person would assume that increasing the power provided to the exciting medium would lead to an improvement in deposition due to increased impact velocity of the coating forming material on the substrate. It would not be obvious in light of the prior art that the creation of coatings with improved structural retention can result from the reaction of chemically activated precursor species between the pulses.

In contrast, the present invention teaches that providing discrete pulses of power allows the coating forming material to form chemically activated precursor species in the form of ions or radicals such that the species can react between the

pulses leading to improved structural retention of the resultant coating on the substrate. Advantageously, the present invention thus results in a coating bearing a strong functional resemblance to the initial coating forming material; whereas, the combination of the methods of Goodwin and Badyal would prevent this functional retention due to the high energy and temperature requirements.

Applicant therefore submits that the skilled person would be discouraged from combining the teachings of Goodwin and Badyal not least because the skilled person would believe that increasing the power provided to the exciting medium would lead to an improvement in deposition. The skilled person would not seek the creation of improved structural retention by pulsing the plasma. Therefore, independent claim 1 is patentable over Goodwin in view of Badyal.

Claims 3-12, 15, 17-21, 25, 26, 28 and 31 each recite combinations of features of independent claim 1, and hence claims 3-12, 15, 17-21, 25, 26, 28 and 31 are patentable over Goodwin in view of Badyal for at least the above-stated reasons that claim 1 is patentable over Goodwin in view of Badyal.

- B. Claim 22 is not properly rejected under 35 U.S.C. §103(a) as being unpatentable over Goodwin in view of Badyal and in further view of Vaartstra.

Claim 22 recites the combinations of features of independent claim 1, and hence claim 22 is patentable over Goodwin in view of Badyal and in further view of Vaartstra for at least the above-stated reasons that claim 1 is patentable over Goodwin in view of Badyal.

- C. Claim 23 is not properly rejected under 35 U.S.C. §103(a) as being unpatentable over Goodwin in view of Badyal and in further view of Ruta and Bailey.

Claim 23 recites the combinations of features of independent claim 1, and hence claim 23 is patentable over Goodwin in view of Badyal and in further view of Ruta and Bailey for at least the above-stated reasons that claim 1 is patentable over Goodwin in view of Badyal.

II. DOUBLE PATENTING:

The Examiner has provisionally rejected claims 1, 4-12, 15-18, 20-23 and 33-35 under the judicially created doctrine of obviousness-type double patenting in view of claims 1, 5-11, 14-21, 25 and 26 of co-pending Application No. 10/514,661 in view of Goodwin. Office Action (1/29/2010), page 7.

Applicant kindly directs the Examiner's attention to M.P.E.P. §804, which states in part that "if a provisional non-statutory obviousness-type double patenting rejection is the only rejection remaining in the earlier filed of the two pending applications, while the later-filed application is rejectable on other grounds, the Examiner show withdraw that rejection and permit the earlier-filed application to issue as a patent without a terminal disclaimer." Furthermore, M.P.E.P. §804 states in part that "if provisional non-obviousness-type double patenting rejections are the only rejections remaining in those applications, the Examiner should withdraw the non-statutory obviousness-type double patenting rejection in the earlier filed application thereby permitting that application to issue without need of a terminal disclaimer." Since the current application (Application No. 10/516,448) was filed prior to co-pending Application No. 10/514,661, Applicant kindly requests the Examiner to allow the current application to issue without the need of a terminal disclaimer if the obviousness-type double patenting rejection is the remaining rejection in the present case.

III. ALLOWABLE SUBJECT MATTER:

Applicant thanks the Examiner for allowing claims 33-35 and for the indication of allowability of claim 16.

IV. CONCLUSION:

As a result of the foregoing, it is asserted by Applicant that claims 1, 3-12, 15-23, 25-26, 28, 31 and 33-35 in the Application are in condition for allowance, and respectfully requests an allowance of such claims. Applicant respectfully requests that the Examiner call Applicant's attorney at the below listed number if the Examiner believes that such a discussion would be helpful in resolving any remaining issues.

Respectfully submitted,

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